What is claimed is:

1. A method of controlling a dissolution rate of a bioactive agent, the method comprising:

selecting a target dissolution rate;

applying a bioactive agent to a delivery substrate as a plurality of substantially uniformly sized dots to attain the selected target dissolution rate.

2. The method of claim 1, wherein applying the bioactive agent to the delivery substrate includes heating a solution including the bioactive agent with a thermal ejection element.

3. The method of claim 1, wherein applying the bioactive agent to the delivery substrate includes displacing a solution including the bioactive agent with a piezoelectric ejection element.

4. A method of controlling a dissolution rate of a bioactive agent, the method comprising:

selecting a desired dot size corresponding to a target dissolution rate;

applying a bioactive agent to a delivery substrate in drops of solution configured to form dots having the desired dot size on the delivery substrate.

5. The method of claim 4, wherein a volume of each of the drops is less than approximately 1×10^{-9} liters.

6. The method of claim 4, wherein a volume of each of the drops is less than approximately 1×10^{-11} liters.

7. The method of claim 4, wherein a volume of each of the drops is in the range of approximately 10×10^{-12} liters and 70×10^{-12} liters.

8. The method of claim 4, wherein the dots are substantially uniformly sized.

9. The method of claim 4, wherein a standard deviation of drop volume is less than approximately 15% of a mean drop volume.

10. The method of claim 4, further comprising selecting a second desired dot size corresponding to the target dissolution rate; and

applying the bioactive agent to the delivery substrate in drops of solution configured to form dots having the second desired dot size on the delivery substrate.

11. The method of claim 10, wherein a standard deviation of drop volume of drops used to form dots having the second desired dot size is less than approximately 15% of a mean drop volume of drops used to form dots having the second desired dot size.

12. The method of claim 4, wherein applying the bioactive agent to the delivery substrate includes heating the solution including the bioactive agent with a thermal ejection element.

13. The method of claim 12, wherein the heated solution is applied via at least two nozzles sized to eject drops of solution having substantially the same volume.

14. The method of claim 12, wherein the heated solution is applied via at least a first nozzle set and a second nozzle set, wherein the first nozzle set includes a first plurality of nozzles configured to eject drops of solution having a first volume, and wherein the second nozzle set includes a second plurality of nozzles configured to eject drops of solution having a second volume different than the first volume.

15. The method of claim 4, wherein applying the bioactive agent to the delivery substrate includes displacing the solution including the bioactive agent with a piezoelectric ejection element.

16. The method of claim 15, wherein the displaced solution is applied via at least two nozzles sized to eject drops of solution having substantially the same volume.

17. The method of claim 16, wherein the displaced solution is applied via at least a first nozzle set and a second nozzle set, wherein the first nozzle set includes a first plurality of nozzles configured to eject drops of solution having a first volume, and wherein the second nozzle set includes a second plurality of nozzles configured to eject drops of solution having a second volume different than the first volume.

18. The method of claim 4, wherein a concentration of the bioactive agent in the solution is set to form dots having the desired dot size on the delivery substrate.

19. A bioactive dosage form, comprising:

a delivery substrate; and

a plurality of dots of bioactive agent on the delivery substrate sized to achieve a target dissolution rate.

20. The bioactive dosage form of claim 19, wherein a standard deviation for a geometric surface-to-mass ratio of the dots is less than approximately 15% of a mean geometric surface-to-mass ratio of the dots.

21. The bioactive dosage form of claim 19, wherein the plurality of dots include a first set of dots and at least a second set of dots, wherein a standard deviation for a geometric surface-to-mass ratio of the first set of dots is less than approximately 15% of a mean geometric surface-to-mass ratio of the first set of dots, and wherein a standard deviation for a geometric surface-to-mass ratio of the second set of dots is less than approximately 15% of a mean geometric surface-to-mass ratio of the second set of dots.

22. The bioactive dosage form of claim 19, wherein the plurality of dots include dried bioactive agent deposited as a constituent element of an ejection solution.

23. The bioactive dosage form of claim 19, wherein the delivery substrate includes an ingestible media.

24. The bioactive dosage form of claim 19, wherein the delivery substrate includes at least one of starch, glycerin, gelatin, wheat gluten, hydroxypropylmethylcellulose, methocel, pectin, xanthan gum, guar gum, algin, pullulan, sorbitol, seaweed, polyvinyl alcohol, polymethylvinylether, poly-(2-ethyl 2-oxazoline), polyvinylpyrrolidone, milk proteins, rice paper, potato wafer, and films made from restructured fruits and vegetables.

25. The bioactive dosage form of claim 19, wherein the delivery substrate includes pullulan.

26. A bioactive agent application system, comprising:

a nozzle;

an ejector associated with the nozzle, wherein the nozzle and associated ejector are collectively configured to selectively eject the bioactive agent in drops of solution configured to form dots having a dot size corresponding to a target dissolution rate.

27. The bioactive agent application system of claim 26, wherein the nozzle and associated ejector are one of a plurality of nozzle and associated ejector pairs, each configured to form dots having a dot size corresponding to a target dissolution rate.

28. A bioactive agent application system of claim 27, wherein a standard deviation for a geometric surface-to-mass ratio of the dots formed from the ejected drops is less than approximately 15% of a mean geometric surface-to-mass ratio of the dots.

29. The bioactive agent application system of claim 26, wherein at least one nozzle and associated ejector pair is configured to form dots having a different dot size than dots formed by at least one other nozzle and associated ejector pair.

30. A bioactive agent application system of claim 26, wherein a volume of each ejected drop is less than approximately 1×10^{-11} liters.

31. A bioactive agent application system of claim 26, wherein a standard deviation of drop volume is less than approximately 15% of a mean drop volume.

32. A method of controlling a dissolution rate of a bioactive agent, the method comprising:

setting an application parameter based on a target dissolution rate; and

applying a bioactive agent to a delivery substrate according to the application parameter to achieve the target dissolution rate.

33. The method of claim 32, wherein applying the bioactive agent to the delivery substrate includes ejecting an ejection solution including the bioactive agent onto the delivery substrate as a plurality of drops.

34. The method of claim 33, wherein each of the plurality of drops is sized to achieve the target dissolution rate.

35. The method of claim 34, wherein a volume of each of the plurality of drops is less than approximately 1×10^{-11} liters.

36. The method of claim 34, wherein a standard deviation of drop volume for the plurality of drops is less than approximately 15% of a mean drop volume of the plurality of drops.

37. The method of claim 32, wherein applying the bioactive agent to the delivery substrate includes heating an ejection solution including the bioactive agent with a thermal ejection element.

38. The method of claim 32, wherein applying the bioactive agent to the delivery substrate includes displacing an ejection solution including the bioactive agent with a piezoelectric ejection element.

39. The method of claim 32, wherein the bioactive agent is applied to the delivery substrate in an ejection solution including the bioactive agent and a carrier solvent.

40. The method of claim 32, wherein the application parameter is selected to effectuate a deposition characteristic of the bioactive agent on the delivery substrate, wherein the deposition characteristic affects the dissolution rate of the bioactive agent.

41. The method of claim 40, wherein the deposition characteristic is dot size.

42. The method of claim 40, wherein the deposition characteristic is dot geometric surface-to-mass ratio.

43. The method of claim 32, wherein the application parameter is one of a plurality of application parameters that collectively affect the dissolution rate of the bioactive agent.

44. The method of claim 32, wherein the application parameter includes nozzle size.

45. The method of claim 32, wherein the application parameter includes chamber size.

46. The method of claim 32, wherein the application parameter includes at least one of nozzle size, nozzle shape, chamber size, chamber shape, pulse character, firing frequency, firing modulation, burst number, firing energy, turn-on-energy, pulse warming, back pressure, substrate temperature, drop spacing, deposition pattern, number of passes, drying methods, dry time between passes, bioactive agent concentration in the ejection solution, solution viscosity, solution surface tension, and solution density.

47. A bioactive dosage form, comprising:

a delivery substrate; and

a bioactive agent that is applied to the delivery substrate according to an application parameter selected to achieve a target dissolution rate.

48. A bioactive agent application system, comprising:

a depositing subsystem configured to fire a plurality of drops including a bioactive agent onto a delivery substrate according to at least one application parameter selected to achieve a target dissolution rate.